6-1-2014

PrimeTimes Newsletter, Summer 2014

Office of Lifespan Studies

COASTAL CAROLINA UNIVERSITY

Office of Lifespan Studies • College of Science
P.O. Box 261954 • Conway, SC 29528-6054

PrimeTimes
SUMMER 2014

PrimeTimes

COLLEGE OF SCIENCE • OFFICE OF LIFESPAN STUDIES • COASTAL CAROLINA UNIVERSITY

PrimeTimes *recognizes that there's always room for a smile – occasionally even a laugh out loud – among the serious topics we address. If you have a humorous story about the lighter side of aging, send it in, and we may publish it in a future issue of the newsletter.*

College Majors

A husband and wife were at a party chatting with some friends when the subject of marriage counseling came up. "Oh, we'll never need that. My husband and I have a great relationship," the wife explained. "He was a communications major in college and I majored in theater arts. He communicates very well, and I just act like I'm listening."

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SUMMER 2014

Is an Annuity the Right Answer?

By Norman F. Whiteley

With the high volatility experienced in the stock market over the past few years and extremely low yields available from bonds and CDs, many retirees have gone to annuities as a way to secure more peace-of-mind. Indeed the right annuity may have a place in the plans of some retirees; however, selecting the right annuity for all or part of a retirement financial portfolio represents a challenge that requires significant education, planning and investigation to do correctly.

Before beginning the process, the investor needs to define what his or her needs will be. Here, not only current needs require consideration, but future needs as well. How will future health care costs be funded? While these may be difficult to quantify accurately, some funds will likely be needed. Has provision been made for inflation? Most of us have difficulty envisioning how much more we will need 10, 20 or 30 years from now to fund retirement at current levels, but it could easily require double or more than now required.

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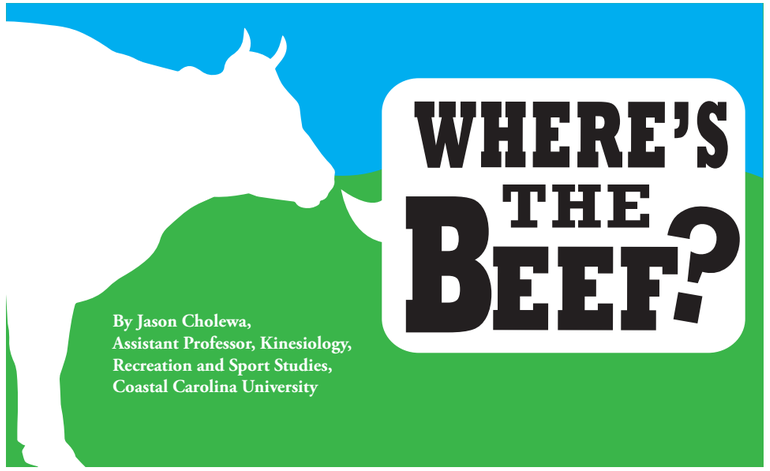

WHERE'S THE BEEF?

By Jason Cholewa,
Assistant Professor, Kinesiology,
Recreation and Sport Studies,
Coastal Carolina University

According to the *Journal of Meat Science*, red meat, including pork, beef, lamb, offal, large game and goat, has received a bad reputation during the past two decades. Red meat has been associated with cardiovascular disease, obesity and even cancer; however, emerging research from randomized controlled trials demonstrates the many health benefits to eating red meat, especially for seniors.

Red meat was first termed "unhealthy" due to its saturated fat content. However, all saturated fats are not created equal. There are several different types of saturated fats, with about 80 percent of the fatty acids in red meats comprised of oliec, steric and palmitic acid. While consuming isolated palmitic acid does raise LDL (AKA: bad) cholesterol, lean red meat has been shown to affect cholesterol similarly to eating chicken or fish. A recent study of more than 650,000 people published in the *Annals of Internal Medicine* concluded that the connection between saturated fat and heart disease is unfounded.

Further, a study by PLoS Medicine demonstrates that industrial trans-fatty acids, diets high in refined starches and sugars, and high levels of sodium intake are the greatest nutritional contributors to heart disease. A recent controlled trial published in the *American Journal of Clinical Nutrition* compared the traditional "heart-healthy" DASH diet, which limits red meat to one ounce per day to a modified DASH diet whereby five ounces of red meat were consumed every day.

The beef-rich diet was equally effective in reducing cholesterol, and more effective than the DASH diet in reducing apolipoprotein B, which is considered a greater indicator of risk for coronary artery disease than LDL cholesterol. This and other randomized controlled trials suggest that lean red meat should be included in part of a balanced diet to manage the risk of cardiovascular disease.

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Flexibility Training

By Tara Josey,
Associate Director,
Campus Recreation,
Coastal Carolina University

Is it good for older adults?

What is flexibility?

Flexibility can be described as that which bends easily or is pliable. As we age, we find ourselves feeling less and less pliable and more and more stiff. Have you discovered over the years your body becoming stiffer and harder to bend and move?

Often times we become unable to perform simple tasks that were once easy and never took a second thought. It is only those folks who spend intentional time stretching and moving their bodies on a daily basis who can continue to experience the flexibility necessary to accomplish those daily tasks without pain or difficulty.

My grandfather, at 93, gets on the floor every morning and does his stretching routine. It's what makes him feel good. It's what makes him capable of getting back up off the floor when he's done. What keeps you from this? Do you feel so stiff that it's more painful to stretch than to not stretch? As we age, the tendons and ligaments in our bodies shorten and are less flexible. This will continue to worsen if we are not moving them like they were meant to move.

Have you heard the phrase "Use it or lose it?" It is a statement of truth. For some, they have already lost it. For others, they are on the path to losing it.

One amazing characteristic of our bodies is that they are great at adapting what we do to them or for them. If you feel like you have lost your flexibility, there is good news. You can get it back.

However, it comes with some effort on your part. You have to move past the thought of "it's too painful to try," and find a simple set of stretches that you can stick with until you can progress. You can train your body to be more flexible.

Why is it so important for us to stretch?

1 *To maintain our quality of life.*

This alone should motivate us, but for some, finding the motivation is very difficult. It only takes a few minutes each day to stretch our bodies, lube our joints and begin to feel better in a short period of time.

2 *It helps improve blood supply.*

Blood circulation to our bodies and tissues help with the healing process. Stretching improves blood circulation, and overall better health.

3 *It helps improve muscle coordination and balance.*

Strengthening those joints can help us avoid injuries and protect us from falls.

4 *It is easier to complete our simple daily tasks.*

Picking up something off the floor. Bending over to tie our shoes. Putting on our clothes. Turning to look at oncoming traffic. The examples are endless.

Below are easy stretches, all from a seated position.
Just start with a few minutes each day. Choose a couple for each area of the body and work your way up to performing them all!

Spine

Hips

Legs

Shoulders

Tara Josey, associate director of Campus Recreation can be reached at tjosey@coastal.edu or 843-349-2815.

New Labels, New Look

By Larissa Gedney, MS, RD, LD, Clinical Nutrition Manager, Conway Medical Center

Food nutrition labels are getting a makeover.

The Food and Drug Administration (FDA) has proposed changes to the traditional labels on the back of foods and beverages. More emphasis will be placed on total calories, added sugars and certain nutrients.

In addition, serving sizes will change from the manufacturer's recommended serving size to a serving size based on consumers' typical portion size for the product. For example, a 20-ounce soda may currently have two and a half servings per bottle, but because most individuals drink a whole bottle, the serving size will change to one. A pint of ice cream will likely go from four servings to two.

Total calories will take center stage on the new labels. With the epidemic of increasing obesity rates, a focus on calories is reaching the forefront of many individuals' minds as they are starting to realize that, ultimately, the best way to lose weight is to consume fewer calories than you burn. Having the total calorie content of foods easy to see and read on food labels may help consumers make better food choices. In addition, the "calories from fat" section will be removed, but the types of fats (i.e. saturated, unsaturated and trans) will remain on the label, as health professionals agree that the type of fat consumed has more importance than the total calories from fat.

The amount of added sugars is creeping up in many Americans' diets and, with the American Heart Association recommending no more than half of your discretionary, or extra, calories be consumed from added sugars, the new labels will give consumers a better understanding of how much they are taking in during the day.

Certain vitamins and minerals will also get a place of honor on the new food label. Vitamin D, of which many Americans do not consume enough, will be added as a standard vitamin

CURRENT FORMAT

Nutrition Facts
Serving Size 2/3 cup (55g)
Servings Per Container About 8

Amount Per Serving

Calories 230	Calories from Fat 40
	% Daily Value*
Total Fat 8g	**12%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**12%**
Dietary Fiber 4g	**16%**
Sugars 1g	
Protein 3g	
Vitamin A	10%
Vitamin C	8%
Calcium	20%
Iron	45%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

PROPOSED FORMAT

Nutrition Facts
8 servings per container
Serving size 2/3 cup (55g)

Amount per 2/3 cup
Calories 230

% DV*	
12%	**Total Fat** 8g
5%	Saturated Fat 1g
	Trans Fat 0g
0%	**Cholesterol** 0mg
7%	**Sodium** 160mg
12%	**Total Carbs** 37g
14%	Dietary Fiber 4g
	Sugars 1g
	Added Sugars 0g
	Protein 3g
10%	**Vitamin D** 2mcg
20%	**Calcium** 260mg
45%	**Iron** 8mg
5%	**Potassium** 235mg

* Footnote on Daily Values (DV) and calories reference to be inserted here.

Food and Drug Administration, February 27, 2014

listing, along with potassium. Daily recommended values will change for fiber and potassium to better reflect what the research has deemed to be the healthiest levels for adults.

While the proposed changes to the food labels may be beneficial to consumers by providing an easier to understand and clearer picture about the products they are consuming, some manufacturers are not happy about these changes.

Adjusting the serving size, and therefore, the total nutritional value of their products, may depict them as having two or three times as many calories and fat as what consumers currently think they are eating. This, in turn, may put pressure on manufacturers to produce a healthier, more appealing product, which ultimately will cost them a significant amount of money.

Whether the FDA's proposed changes to the food labels are approved or not, bringing attention to the importance of reading labels to better understand what individuals are consuming can lead to healthier food and beverage choices, and more accountability of manufacturers for their products.

Larissa Gedney can be reached at Conway Medical Center at 843-347-8242.

BBB | SCAMwatch

By Kathy Graham, President/CEO, Better Business Bureau, Coastal Carolina, Inc.

As the South continues to endure unseasonably cold temperatures, ice and snowstorms, it's highly unlikely that your air conditioner has been a top concern. Many of our communities suffered power outages and downed trees. The Better Business Bureau (BBB) recommends making sure your air conditioner is working now while temperatures are still low, to ensure everything will run properly when temperatures change to the hot and humid spring and summer months for which the South is famous.

Heating and air conditioning is something that is important to think about year round. Never just hire the first tech that comes along–check with the BBB beforehand and do careful research. We also recommend that you get at least three estimates from different companies and ask for references. Should you decide to hire a BBB Accredited Contractor, you can feel safe in knowing we have investigated their licensing and background.

If you are looking into repair or regular maintenance of your HVAC (heating ventilation and air conditioning) unit before temperatures rise, make sure to look for reputable contractors. Many people simply turn to the phone book and call the company with the biggest ad, assuming they are a bigger company and more reputable. Sometimes, this can lead to a hole in your wallet or an unsatisfactory repair job. Last year, the BBB serving Coastal Carolina received more than 600 inquiries and complaints for residential air conditioning and heating contractors. Common mistakes consumers and business owners made included hiring the first contractor they found, not doing careful research and not getting all the details of their service or repair in writing.

The BBB recommends the following tips when looking for a contractor to repair or maintain your air conditioning unit:

• Research the company's background and licensing.
Visit bbb.org for the BBB Business Review of any HVAC service company you plan to hire. Learn more about its reputation and history of complaints. Always confirm that the company is licensed and insured.

• Beware of companies that ask for up-front payment.
A smaller company may ask for a draw (1/3 of total fee) to help in securing materials. However, a more reputable contractor should have lines of credit with the merchants with whom they deal. It is always best when you pay for the job when the job is complete.

• Compare prices and service packages.
Get at least three estimates for any air conditioning repair work or maintenance work. All bids should be in writing and should provide a full description of the services to be provided and the materials to be used.

• Review warranty coverage.
Find out if the company offers any type of warranty or guarantee. Make certain you understand the terms and conditions of the coverage. Also, be sure to check the warranty on your current air conditioning unit to determine whether any repairs or replacements may be covered.

• Ask about energy efficiency.
Many new air conditioning units are manufactured to be more energy efficient than others. Look for the ENERGYSTAR label to find out more about products that may cost a little more up front, but save you in energy costs over time. Some models may even be eligible for a tax credit. Ask your HVAC contractor to verify tax credit eligibility and provide the Manufacturer Certification Statement for the equipment you plan to purchase.

Kathy Graham, President/CEO, Better Business Bureau, Coastal Carolina, Inc., can be reached at 843-488-0238; fax 843-488-0998 or email at kathygraham@sc.rr.com.

As a private, nonprofit organization, the purpose of the Better Business Bureau is to promote an ethical marketplace. BBB helps resolve buyer/seller complaints by means of conciliation, mediation and arbitration. BBB also reviews advertising claims, online business practices and charitable organizations. BBB develops and issues reviews on businesses and nonprofit organizations and encourages people to check out a company or charity before making a purchase or donation.

THE LUCK OF THE HAT

By Bridgette Johnson

I believe in stories. I believe in good luck charms. And I believe that every good luck charm has a story. My son Eli's good luck charm – a University of South Carolina Gamecocks 2010 World Series Championship hat – has a story, and because of that story, it remains glued to his little head, even after four long years of wear and tear, sweat and tears.

A family friend, Mr. Paul, gave the hat to my husband, Timmy, after the Gamecocks brought home the first of back- to-back college world series wins in 2010. It was a trophy hat, really, not something that he'd wear, just own. But, when football season rolled around, the hat quickly earned the right to serve as the official Johnson house South Carolina Gamecocks good luck charm. During the USC-Alabama game, Timmy presented Eli with the hat and asked him to rub it for good luck. And what do you know? USC beat the #1 team in the Southeastern Conference, the Alabama Crimson Tide, and the superstition of the luck of the hat began. From that point forward, the hat never missed a football game get-together. Everyone present was always asked to rub the hat should our beloved Gamecocks fall behind.

So one day, for "Crazy Hat Day," Eli asked if he could wear the hat to school for the day. Obviously, it brought an extra sense of good luck or comfort, because since that day, he's never left the hat at home. If he does, he panics. We MUST turn around for the hat. I don't even know if it's ever left his head, other than to wash his hair or put on his four-wheeler helmet. At this point, he's worn it so much it's faded and it smells, but it's a piece of him and so meaningful to him that hat will forever have a home.

You know, in life's big picture, we all wear hats, often multiple hats. I wear the hat of wife, mother, daughter, sister, aunt, friend, employee and co-worker. But here's what's great about the phrase "many hats" – if we think about it, it reminds us that even though we wear many hats, there's one person, the same person, underneath each of them.

And often that, in itself, is an overwhelming thought and feeling. All it takes is one moment where we feel a little out of kilter, and our whole world can come crashing down around us – if only for a day.

What we often fail to realize of these hats we wear is the good that can come from each. How many times have you found yourself feeling better after completing a random act of kindness for someone other than yourself? It's during these times that we put ourselves aside and really extend ourselves, even if impulsively, to help another. And what we find on the other side of the good deed is our own blessing.

When my many hats get me feeling a bit anxious, whether it's a child's cry for attention, ball practice, dance rehearsal, dishes to wash or clothes to fold, I try to remind myself that somewhere, someone out there would love to trade places with me. They'd love to have children to hold, a warm house to clean, a loving husband to come home to, a mother and sister to call up for a nice, long chat, and a vehicle capable of carting them around on their many errands. It's when I stop and think that someone actually genuinely needs me and no one else at the moment, I see the blessing – not an obstacle, but an opportunity to do exactly the things God put me here for.

And when the real storms of life roll in, those that are more difficult to wrap my arms around, I try not to lean on my own understanding. Christ told us He would not give us more than we can handle, so trust in Him. When things get most difficult and I just don't know how I can get it all done is when I lean most on Him.

And I remember that all my hats were chosen for me and are gifts to me…perhaps my very own good luck charms. They are each parts of my story and what a great story it is.

Bridgette Johnson is a PrimeTimes *pioneer contributor and a favorite of PT readers. Her writing is sure to encourage us to think of home, of growing up, of parents and siblings, and grandparents, and old friends and old stories, schooldays and maybe even old romances. As stated in earlier issues of* PrimeTimes, *Bridgette is the "Horry Home Companion," bringing life alive with tales – not "tall," but true and heartfelt. Bridgette is a gardener as well as a writer, sowing seeds for blooming as well as for thinking. Previous articles can be found at coastal.edu/lifespan, click on* Prime Times.

Continued from page 1..... *Is an Annuity the Right Answer?*

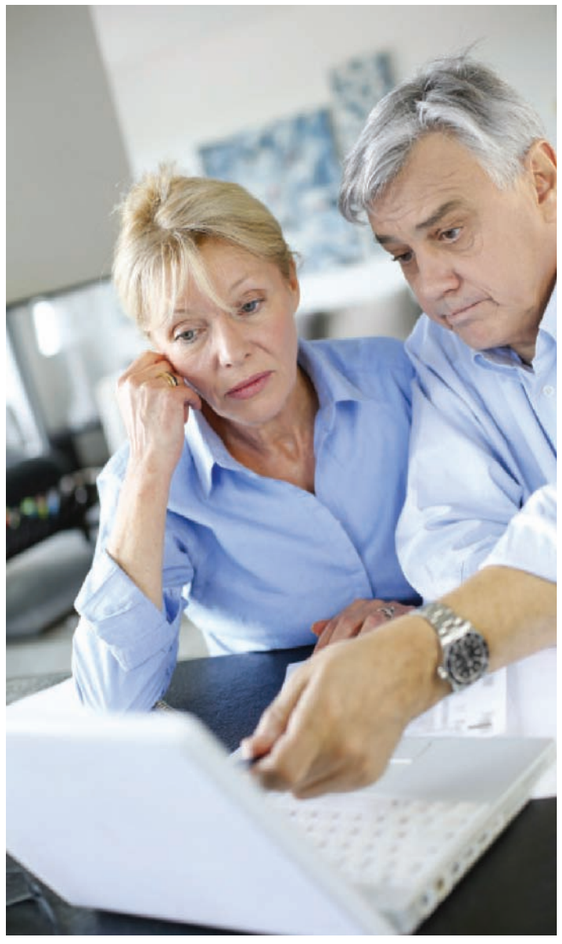
With increasing life spans afforded us by modern medical technology we have to ask, are we prepared to fund a retirement of 30 or even 40 years or more?

Given these considerations, care must be taken to position investments properly and avoid consuming principal from your retirement fund too early. Once all of these requirements have been carefully determined, the process of finding the correct annuity to meet one's needs can begin.

Annuities are generally grouped into two broad categories: variable and fixed. Each of those categories can be further divided into deferred and current income. Sounds simple but the variations within each of these categories, not to mention the "hybrids" that combine both types, along with hybrid variations, makes choosing the right one very difficult. One of the major drawbacks associated with annuities are the fees. Due to the complexity of the annuities themselves, it is often difficult to understand what you are getting and what you are paying for it. When evaluating an annuity, make sure you fully understand all of the terms. There are insurance fees that include mortality and expense fees and administrative fees that pay for the insurance guarantees included in the contract as well as selling and administrative expense. In addition, most insurance companies that provide annuities limit the amount of withdrawals that can be made each year and charge a surrender charge for amounts withdrawn that are greater. Then there are investment management fees, the size of which are dependent on the types of investments chosen in the annuity. If you require special riders in your annuity contract, there will also be an additional fee for those.

Each person will have different requirements from the annuity, and it's difficult to speak in generalities about what is the correct set of requirements and the correct respective fees for them. Various payout options with different fees may be offered, such as the lifetime option, which pays the holders income for their entire lives. That can be great if you live a long time, but not so great if you don't, since payments would end.

Due to the complexity of the annuities themselves it is often difficult to understand what you are getting and what you are paying for it.



Are YOU an Ecological Detective?

By James O. Luken, Associate Provost, Director of Graduate Studies, Coastal Carolina University

1. Where was this photograph taken? Be specific.
The photograph was taken at Shaken Creek Savanna Preserve in Pender County, N.C., You can read about this place at: nature.org/ourinitiatives/regions/northamerica/unitedstates/northcarolina/placesweprotect/shaken creek.xml

2. What species of carnivorous plant is most visible?
The most visible carnivorous plant is the yellow pitcher plant (Sarracenia flava).

3. What other small carnivorous plant is likely there but hidden?
The Venus' flytrap does indeed occur at this site, but it is so small you can't see it…. at least in the photograph.

4. Why are there no trees in the foreground?
This site is managed by regular prescribed burning. The fire tends to eliminate trees and shrubs. It also encourages grasses and herbs.

5. Who (an entity) manages this area?
The Nature Conservancy.

6. Who (a person) knows more about this area than anyone else?
Robert Thornhill did his master's degree thesis here. He meticulously recorded every plant species. You can read his work at: repository.lib.ncsu.edu/ir/handle/1840.16/8408.

7. How do you know that people were here?
Look carefully at the picture. You can see the trampled paths made by those snapping photographs. Too much trampling can have a negative impact on rare plants.

In the next issue of PrimeTimes *there will be a new mystery. James Luken can be reached at joluken@coastal.edu.*

PrimeTimes wants to hear from YOU!

If you have comments or questions about articles in this issue, want to submit a letter to the editor, ask a question or make a comment, or if you would like to suggest appropriate subjects for consideration in future issues, the *PrimeTimes* staff wants to hear from you. If you want to be added to the Prime Times mailing list, just email, call, fax or write to let us know. Previous issues of *PrimeTimes* can be viewed at coastal.edu/lifespan.

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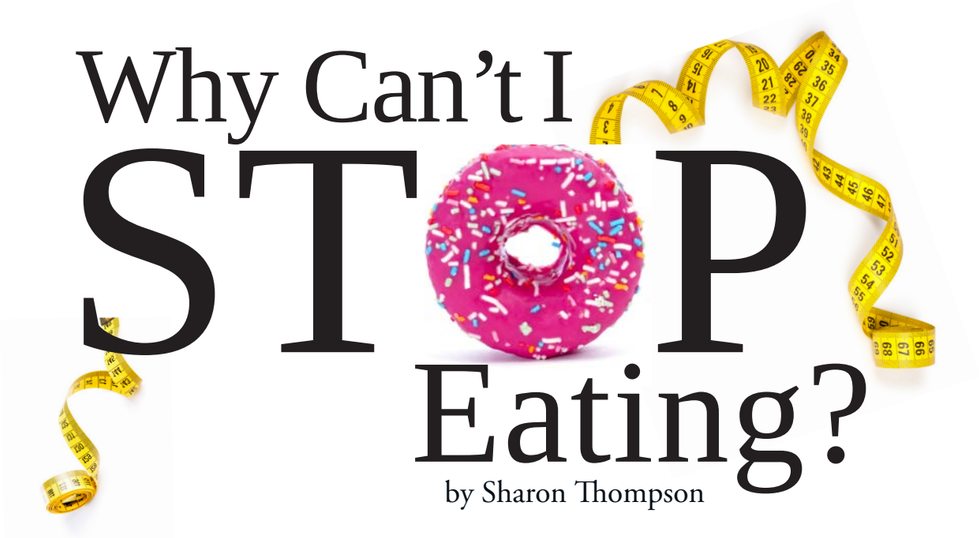
Why Can't I STOP Eating?



by Sharon Thompson

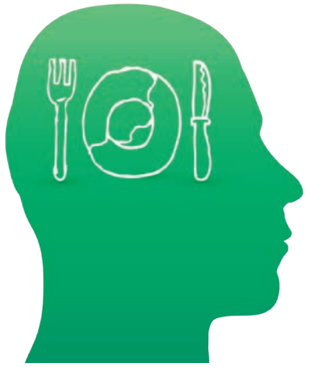
Could food addiction be the reason why some people have a difficult time losing weight?

Scientists are now finding that certain foods, especially those high in sugar, fat and salt, may affect the brain's reward system in a way similar to drugs. Most of the processed foods we consume daily have added sugar, fat and salt. In fact, food manufacturers are fully aware of this and often layer these flavors so that we can experience the bliss of sugar, fat and salt together. The reason for blending these tastes is that most people report that food is more desirable when these flavors are together. For example, a chocolate brownie contains both sugar and fat, but a salted caramel brownie also adds a salt punch—so this addition increases the desirability of the brownie.

This "sugar, fat, salt" scenario is applicable for foods we consider "healthy" as well. A salad of grilled chicken and romaine lettuce would have little sugar, fat or salt; however, if we salt, flour and fry the chicken, this would add salt and fat tastes. Top the salad with a sweet dressing, and you have increased the consumer's desire for this salad, as well as its marketability. Eating these sugar, fat and salt combinations increases one's sense of reward upon consumption, thereby raising the likelihood of it becoming harder to resist when future food choices are made.

Why is layering the tastes of sugar, fat and salt a problem? Because more than one-third of American adults are now obese, and there are many obesity-related diseases. Some researchers have proposed that the addictive qualities of certain tastes may be involved in the cause of obesity for a certain subgroup of obese individuals. The term "food addiction" has been coined as a syndrome that is currently being researched to determine why certain people, especially those who are overweight, find these highly palatable foods so pleasurable and so very difficult to resist.

On a biological level, it has been suggested that food and drug addictions may be closely related. The main similarity between the two involves the neurotransmitter dopamine, which is associated with pleasure or reward. Greater amounts of dopamine are released when individuals consume foods that are considered to be more rewarding. In a study published in the *Journal of Addictive Disorders*, Wang and colleagues used positron emission tomographic (PET) scans of obese and drug dependent persons and found that both had significantly lower dopamine receptor levels compare to those persons who were lean and/or not drug dependent. The fewer dopamine receptors in obese and drug dependent individuals may prevent them from achieving their desired level of pleasure when either eating or abusing other substances; furthermore, this lowered level of dopamine receptors causes "food addicted" individuals to frequently overeat, particularly foods high in sugar, fat and salt, which can quickly lead to weight gain.



Another biological similarity has been seen regarding activation in the brain due to a food or drug stimulus. Stoeckel and colleagues published research in Neuroimage that suggests high calorie food cues in obese persons are mediated by the hyperactive reward system. These researchers used magnetic resonance imaging (MRI) scans to examine the brains of obese and control groups when shown photos of high and low calorie foods. The scans revealed obese participants had higher activation in numerous brain areas compared to the lean control participants; furthermore, higher activation was seen among the obese participants in the same areas of the brain associated with drug cravings when expecting to eat certain foods.

To support the food addiction hypothesis, scientists have also turned to animal experimentation to see how they react to certain tastes. The most convincing evidence for a food addiction model actually comes from animal research. Rats exposed to high fat, high sugar or a combination of high sugar, high fat diets develop behaviors similar to addiction, including compulsive food seeking, withdrawal and binge eating. Rada and colleagues published research in *Appetite* that found rats on daily intermittent sugar consumption slowly increased their sugar intake from 37 to 112 ml/day, perhaps showing tolerance. Finally, animals who developed a sugar dependence have shown anxious and agitated actions upon removal of sugar from their diet. Although animal research does not necessarily translate into the same findings in humans, it provides avenues for possible further research.

Conquering food addiction is not necessarily a magic bullet for obesity prevention because lack of physical activity and multiple other factors can contribute to unhealthy weight gain. Further understanding of this concept does lead researchers to consider how eating behavior might be driven by visual cues such as food advertisements on television, billboards and the many fast food establishments we ride by each day.

For many people, the sight or smell of certain foods can motivate reward-seeking behavior so that more dopamine is released. This, in turn, leads to additional eating due to abnormalities in brain dopamine receptors. In other words, people may seek high calorie foods for the dopamine release and then desire to eat more to compensate for dopamine deficiencies.

Rats exposed to high fat, high sugar or a combination of high sugar, high fat diets develop behaviors similar to addiction, including compulsive food. seeking, withdrawal and binge eating.

The concept of food addiction is quite a controversial theory that purports that some foods, especially those processed with sugar, fat and salt, trigger an addictive process similar to that of substance abuse. Food addiction is not currently validated as a disorder, and more research is needed to make it clinically useful. If certain foods are in fact addictive, future obesity treatments might also explore methods that have been used to treat substance dependence.

Sharon Thompson can be reached at sthompson@coastal.edu

Red meat is rich in protein, zinc, b-vitamins and iron which have all been shown to play a role in the preservation of muscle mass, cognitive function and appetite during aging.

Where's the Beef? ..... *continued from page 1*

A calorically appropriate diet that is rich in nutrient-dense foods, such as minimally processed fruits and vegetables, fiber-rich whole grains, low-fat dairy and lean meats, in conjunction with exercise, helps support a healthy weight throughout life. Red meat has been associated with obesity; however, cofounders such as non-discriminatory food selection (e.g.,: a McDonald's cheeseburger vs. lean steak), total caloric intake or physical activity may explain the relationship. On the other hand, controlled trials published in the *Journal of Nutrition* show no differences in weight loss between white and red meat as part of a higher protein diet (up to 30 percent of caloric intake), especially when combined with exercise. These studies suggest that red meat can be successfully incorporated into a weight management diet.

Traditionally red meat, as part of the western diet, was also highly associated with cancer risk. More accurate models of etiology and the results of a large prospective study presented at the annual meeting of the American Association for Cancer Research showed little to no association between fresh (not processed) red meat consumption and cancer risk. More recent studies in the *American Journal of Epidemiology* also show that the risk of cancer and cardiovascular disease is increased with processed, but not whole, meat consumption.

Red meat is rich in protein, zinc, b-vitamins and iron, which have all been shown to play a role in the preservation of muscle mass, cognitive function and appetite during aging. A recent study published in the *Journal of Clinical Nutrition* points to the physical benefits of consuming red meat as part of a well-balanced diet. Older adults who consumed at least 40g of beef per day experienced less weight gain and lost approximately 40 percent less lean mass than those consuming a low-protein diet. In addition to supporting physical function, the consumption of meat, especially red meat, may also help to maintain memory, reasoning and the ability to learn new information during aging.

A study published in the *Journal of the American Geriatrics Society* demonstrated that participants who ate a diet rich in animal protein experienced less decline in social activity, intellectual skills, physical function, and a lower risk of dementia and Alzheimer's disease.

The results of a randomized controlled trial published in the *American Journal of Clinical Nutrition* provide strong evidence for the inclusion of red meat as part of a healthy diet and exercise program. In this study, 100 women (ages 60-90) completed four months of strength training and ate either a standard diet or a diet containing one 6-ounce portion of red meat consumed six days per week. The women consuming red meat gained more lean muscle mass and strength, produced more IGF-1 (a hormone important to muscle growth and brain function) and experienced a reduction in inflammation without experiencing any negative changes in cholesterol or blood pressure. The results of several epidemiological and controlled trial studies suggest that the consumption of 3-4 servings of red meat per week as part of a diet rich in fruits and vegetables and an exercise program may benefit older adults by preserving muscle mass, enhancing physical function and preventing the decline in cognitive ability and neural health associated with aging without negatively effecting cardiovascular health. Hetrocyclic amines (HCAs) are one of the primary carcinogens generated by processing/cooking meat. HCAs are not unique to red meat, and baking fish will actually produce more HCAs than baking beef. The more the meat is processed and the higher the cooking temperature, the more HCAs are generated. Therefore, to reduce HCA generation, food preparation methods that absorb or detoxify HCAs, such as lower cooking temperatures, slow cookers, marinating, rubbing with fresh herbs, turning meats more frequently to reduce surface temperatures, avoiding charcoal grilling, and including side vegetable dishes rich in fiber and flavonoids, are a simple means of reducing carcinogens.

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An alternative is a period certain annuity which pays for a certain period of say, 10 or 15 years. This provides a benefit to your heirs even if you pass away. Then there's a combination of life with period certain which pays for as long as you live, but gives benefits to heirs if you die within a certain period. Then there is the joint life option, which allows a continuation of the income stream if one spouse should die. These are just a few of the options and nuances offered in current annuity contracts.

Investors must become educated and be in a position to determine the best value for their requirements and utilize the benefits provided. In addition, be sure that when you make a decision to buy, you're buying from a well established, reputable company. The annuity contract is a promise to pay, and it's only as good as the company offering the contract. Keep in mind that the annuity contract is developed by the provider in order to make profit for them. You will be paying a significant fee for the services provided. Also, beware of any hidden costs. For example, when an annuity puts a ceiling on any gains that you can receive from the investments in your account, that represents an additional cost being charged to you. The contract is usually structured so that these gains more than offset any downside guarantees.

Each person must decide if an annuity is right for them, but before making that decision, everyone should make sure to do the homework and also thoroughly evaluate other options, like hiring an investment manager or constructing your own portfolio, as well.

An investor must become educated and be in a position to determine the best value for their requirements and whether they can utilize the benefits provided.

Norm Whiteley publishes a free monthly online investment newsletter and teaches classes for the Coastal Carolina University Osher Lifelong Learning Institute (OLLI). He is a past president of Lifelong Learning. Whiteley started a website for the OLLI Investor Education Club dealing with investing questions or expertise sharing at groups.google.com/group/investment-fundamentals. If you're interested in his monthly newsletter, you can request it via email. He can be reached at nwhiteley@sc.rr.com.